WTS1x4 Series Inclinometer Module

User manual

4~20mA

沃感科技
WOOSENS TECHNOLOGY

1、Introduction

WTS1x4 series is the high performance, low-power consumption inclinometer that incorporates advanced 3D-MEMS sensing technology and calibration algorithm to provide excellent accuracy.

The sensor is mounted in a water proof housing(IP67) which provide three holes for fixation and a commonly used M12 connector(IP67). The 4~20mA output allows for long connecting lines. Using an appropriate resistor, the current output can be converted to voltage singals.

Features

- High repeatability up to 0.01° over range
- Sensor element shock proof >20000g
- 10~30V power supply
- Sensor is calibrated at 0°
- Ruuged water proof metal housing
- Operating temperature:-40~85℃
- RoHS
- 3D MEMS sensor

Applications

- Inclination measurement, alarms
- Level adjustment
- Automotive safty
- Navigation instruments
- Platform and boom lift leveling
- Heavy machines

We're sure the WooSENS WTS1x4 inclinometer will help you to achieve the greatest performance from your system. Thank you for selecting WTS1x4 inclinometer.

2、Sepecificaiton

2. 1 Electrical Parameter

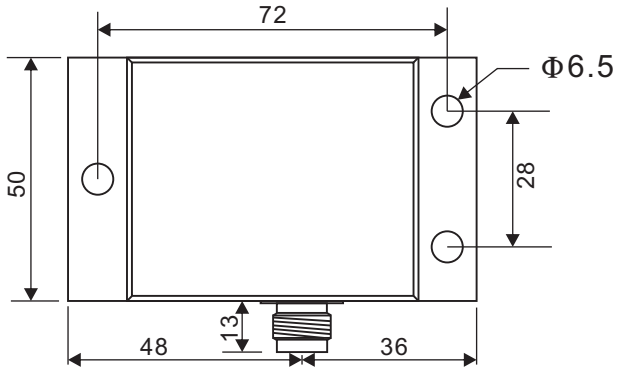
Parameter	Min	Tye	Max	Unit
Supply Voltage	10	12	35	V
Resistence(12V)			250	Ω
Current consumption	20		30	mA
Operating temperature	-40		+80	℃
Storage temperature	-40		+100	℃

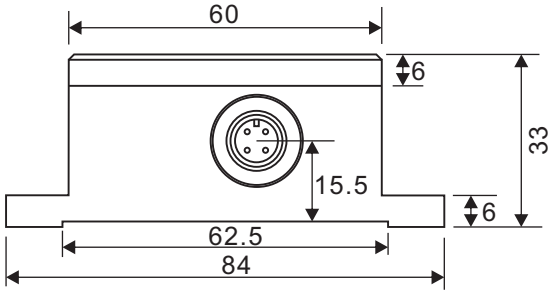
2. 2 Performance Sepcification

Parameter		Specification
Measuring Direction		X-Y
Measuring Range		±15° /±30° /±90°
Output current @0°		12mA
Repeatability		0. 01° /0. 02° /0. 10°
Calibration offset		Max. ±0. 2mA, Tye.±0. 1mA
Cross-axis sensitivity		Max 4%, tye 2%
Frequency Response		1Hz
Sensitivity	±15° Range	30. 91mA/g
	±30° Range	16mA/g
	±90° Range	8mA/g
offset temperature dependency		Max 0. 008° /℃

Note: The relative accuracy is measured at the room temperature(23℃),if temperature compensation is needed, please contact with local sales.

3、Dimensions



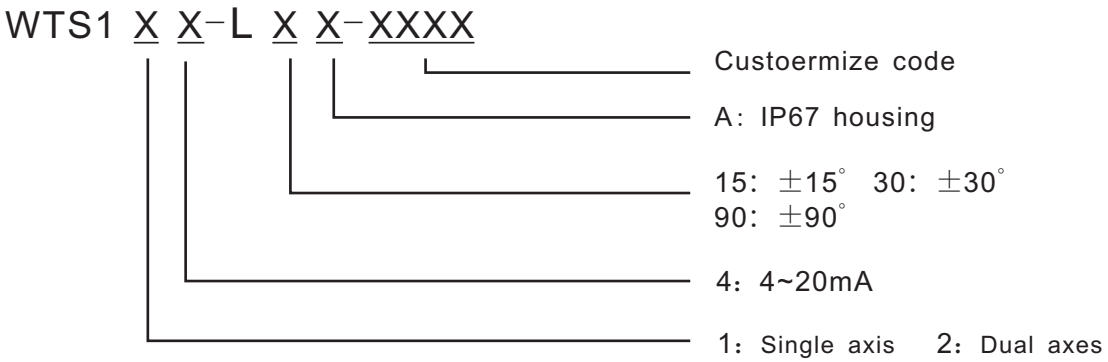


4、Pin definition

Accessary:115-67000-0000

ines	Brown	White	Blue	Black
4~20mA	X-OUT	X-OUT	Y-OUT	Y-OUT

5、Slection guide



6、Angle convertion

Isensitivity = 16mA/(2*sin(max Angel)g)[mA/g]

Angle(°) = arcsin((Iout(@Angle)-Iout(@0°))/Isensitivity)

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